choose. The first is the left side properties and the second is the right side properties. For both of these the first option was used to model this girder. These, as the previous loading options, are dependent on how the load is applied and the beam is arranged. Once these values are inputted the program is ready to run.

C.6 Analysis Options

After the input for the section and the loads have been entered, the section is ready to be analyzed. In the "Solve" menu, there are ten sub-menus that can be chosen, each dealing with a different type of analysis. The only two analysis options that were used in the project were the "Sectional Response" and the "Member Response" options. The "Sectional Response" option calculates the single load, if one is inputted, and then applies the incremental load until failure. The "Member Response" option shows the full member properties and analyzes the entire beam. The other options, excluding the "One Load" option, are strain state analyses and are discussed further in Section 4-2 of Appendix D.

C.6.1 Analysis Options: Sectional Response

When "Sectional Response" is selected from the "Solve" menu, the screen will show two graphs on the left side of the screen and nine pictures/charts on the right. These graphs will progress through the incremental load steps and show the user how the section is reacting to the loads. Once the analysis is complete (15 seconds, or more if the section is really complex) the ultimate moment and curvature will be displayed on the bottom left graph marked M-Phi. This moment is the total moment capacity of the section. In order to find the necessary applied load to cause this moment, the dead load moment of the member must be subtracted from the total moment and then the resulting